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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,367	12/18/2001	Mark Evensen	1411.101	8059
30973	7590	03/11/2005	EXAMINER	
SCHEEF & STONE, L.L.P. 5956 SHERRY LANE SUITE 1400 DALLAS, TX 75225			SAADAT, CAMERON	
			ART UNIT	PAPER NUMBER
			3713	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/026,367

Applicant(s)

EVENSEN ET AL.

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/15/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-86 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19, 23-40, 44-61, 65-82 and 86 is/are rejected.
- 7) ☒ Claim(s) 20-22, 41-43, 62-64 and 83-85 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

In response to amendment filed 11/15/2004, claims 1-86 are pending in this application.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-13, 17, 23-35, 39, 44-56, 60, 65-77, 81, and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahlgren (USPN 6,293,802 B1) in view of McNitt et al. (USPN 6,537,076; hereinafter McNitt).**

Regarding claims 1, 23, 44, 65, 86, Ahlgren discloses a method and system for managing data describing each of a plurality of repetitive motions executed by a plurality of individuals at a plurality of repetitive motion stations 104 located at a plurality of locations, the method comprising the steps of: receiving the data via a network 112 from each of the plurality of stations 104; recording the data in a data storage device (Col. 6, lines 11-16); receiving via the network from a requester at a remote terminal a request for a selected portion of the data; and transmitting via the network to the requester at the remote terminal the selected portion of the data (Col. 5, lines 59-61). Ahlgren discloses all of the claimed subject matter with the exception of explicitly disclosing the feature of capturing *three-dimensional X, Y, Z*

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*coordinates* defining the location of at least one point of an individual. However, McNitt discloses a system for capturing a repetitive motion, wherein the captured motion includes information identifying sensed positional measurements relative to a three-dimensional coordinate system (Col. 8, lines 7-50).

Hence, in view of McNitt, it would have been obvious to one of ordinary skill in the art to modify the captured motion described in Ahlgren, by capturing the motion in a three-dimensional coordinate system in order to accurately capture and represent a user's motion in order to train a user to improve said motion. In addition, the combination of Ahlgren and McNitt does not explicitly disclose the use of *triangulation* to determine the three-dimensional coordinates (as per claims 23, 44, 65, and 86).

However, it is the examiner's position that it is well known to implement triangulation principles with three-dimensional digitizing systems in order to visualize real-life objects and to provide a realistic representation of shapes and textures with reasonable speed. Thus, it would have been obvious to an artisan to modify the 3D motion capturing system as described in the combination of Ahlgren and McNitt by utilizing triangulation to determine three-dimensional coordinates in order to visualize real-life objects and to provide a realistic representation of shapes and textures with reasonable speed.

Regarding claims 2, 24, 45, 66, Ahlgren discloses a method wherein the requester is at least one of the individuals who executed the repetitive motions, at least one instructor responsible for instructing the individual who executed the repetitive motions, and another individual who has permission to access the data (Col. 5, lines 50-67).

Regarding claims 3, 25, 46, 67, Ahlgren discloses a method wherein the network comprises at least one of the Internet, an intranet, a local area network (LAN), a wide area network (WAN), a T1 line, and satellite communication (Col 5, line 40).

Regarding claims 4, 26, 47, 68, Ahlgren discloses a method wherein requester is the individual who executed the repetitive motions, the network comprises at least one of the Internet, an intranet, a

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local area network (LAN), a wide area network (WAN), a T1 line, and satellite communication, and the individual is requesting the data from a computer terminal located at the individual's residential home (Col. 5, lines 50-67, line 40)..

Regarding claims 5, 27, 48, 69, Ahlgren discloses a method wherein the repetitive motions include at least one of a previous motion executed by the individual, a motion template executed by the individual, and a motion generated by an expert (Col. 10, lines 25-30; Col. 15, lines 5-7).

Regarding claim 6, 28, 49, 70, Ahlgren discloses a method further comprising: designating for a selected individual a model motion to be a motion template for the selected individual; recording the template in the data storage device; and comparing repetitive motions of the selected individual against the motion template to determine at least one delta between the motion template and the executed repetitive motion (Col. 10, lines 25-30).

Regarding claims 7, 29, 50, 71, Ahlgren discloses a method wherein the plurality of stations include at least two stations geographically separated from each other (Col. 5, lines 25-31).

Regarding claims 8, 30, 51, 72, Ahlgren discloses a method further comprising: designating for a selected individual a model motion executed by the individual at a first station at a first location to be a motion template for the selected individual; recording the motion template in the data storage device; executing a repetitive motion by the selected individual at a second station at a second location separated from the first station at the first location; and comparing executed repetitive motions of the selected individual at the second station at the second location against the motion template to determine at least one delta between the motion template and the executed repetitive motion (Col. 10, lines 25-30; Col. 11, lines 55-57).

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Regarding claims 9, 31, 52, 73, Ahlgren discloses a method further comprising: designating for a selected individual a model motion to be a motion template for the selected individual; recording the motion template in the data storage device; comparing a executed repetitive motion of the selected individual against the motion template to determine at least one delta between the motion template and the executed repetitive motion; and providing feedback describing the at least one delta to the selected individual (Col. 15, lines 5-18; Fig. 11).

Regarding claims 10, 32, 53, 74, Ahlgren discloses a method further comprising: designating for a selected individual a model motion to be a motion template for the selected individual; recording the motion template in the data storage device; comparing an executed repetitive motion of the selected individual against the motion template to determine at least one delta between the motion template and the executed repetitive motion; developing an individual feedback profile; and providing feedback in accordance with the individual feedback profile describing the at least one delta to the selected individual (Col. 15, lines 5-18; Fig. 11).

Regarding claims 11, 33, 54, 75, Ahlgren discloses a method further comprising: designating for a selected individual a model motion to be a motion template for the selected individual; recording the motion template in the data storage device; comparing an executed repetitive motion of the selected individual against the motion template to determine at least one delta between the motion template and the executed repetitive motion; developing an individual feedback profile indicating individual preference for the presence or absence of at least one of positive feedback, negative feedback, visual feedback, audible feedback, verbal feedback, one or more selected aspects of executed repetitive motion, and time of the executed repetitive motion; and providing feedback in accordance with the individual feedback profile describing the at least one delta to the selected individual (Col. 15, lines 5-18; Fig. 11).

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Regarding claims 12, 34, 55, 76, Ahlgren discloses a method further comprising determining a monetary amount to pay to an instructor each time an individual instructed by the instructor practices the motion without the instructor (Col. 10, lines 5-12).

Regarding claims 13, 35, 56, 77, Ahlgren discloses a method further comprising compiling data from the plurality of individuals to generate statistical data usable to manufacturers of equipment and apparel used when executing the motions in a selected sport (See Fig. 15).

Regarding claims 17, 39, 60, 81, Ahlgren discloses a method wherein the repetitive motion is at least one of a golf swing, a basketball shot, a baseball bat swing, a tennis swing, a bowling ball swing, a baseball pitch, a gymnastic exercise, and figure skating (Col. 5, line 13).

**Claims 14-16, 36-38, 57-59, 78-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahlgren (USPN 6,293,802 B1) in view of McNitt et al. (USPN 6,537,076; hereinafter McNitt), further in view of Nesbit et al. (USPN 5,772,522; hereinafter Nesbit).**

Regarding claim 14-16, 36-38, 57-59, 78-80, the combination of Ahlgren and McNitt discloses all of the claimed subject matter with the exception of explicitly disclosing the feature of generating statistical data usable by manufacturers of at least one of golf balls, golf shoes, golf clubs, golfing apparel, golf grips, golf gloves, and golf teaching apparatuses (as per claims 14, 36, 57, 78) and generating a recommendation of what equipment and apparel the particular individual should use based on statistical data generated for the particular individual (as per claims 15-16, 37-38, 58-59, 79-80). However, Nesbit discloses a method for analyzing golf swings, wherein statistical data is utilized to modify golf clubs and to provide recommendations based on golf club performance and handicaps (Col. 12, lines 25-35). Thus, in view of Nesbit, it would have been obvious to an artisan to modify the statistical data of the golf swing described in Ahlgren and McNitt, by utilizing the data to provide recommendations for equipment selection, in match a golfer with the appropriate equipment, and thereby improving the golfer's swing.

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**Claims 18-19, 40, 61, 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahlgren (USPN 6,293,802 B1) in view of McNitt et al. (USPN 6,537,076; hereinafter McNitt), further in view of Costin, IV et al. (USPN 6,321,128; hereinafter Costin)**

Regarding claims 18-19, 40, 61, 82, Ahlgren discloses a method for conducting a virtual tournament between individuals of a selected portion of the plurality of individuals, the method further comprising: selecting for each individual of the selected portion of the plurality of individuals data describing at least one motion, the data including performance results of the at least one motion (Col. 13, line 62 – Col. 14, line 9) and comparing the motion and performance results of each individual in the tournament to a professional's motion. Ahlgren and McNitt disclose all of the claimed subject matter with the exception of explicitly disclosing that the motion and data including performance results of each individual in the tournament is compared *to one another* to determine which individual has the best performance results to determine the winner of the tournament. However, Costin discloses a method of obtaining performance results of a plurality of individuals in a tournament to determine which individual has the best performance results to determine a winner (See Fig. 7). Hence, in view of Costin, it would have been obvious to one of ordinary skill in the art to modify the tournament described in Ahlgren, by comparing the performance results of each individual in the tournament against one another, in order to determine a winner in the tournament.

***Allowable Subject Matter***

Claims 20-22, 41-43, 62-64, 83-85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Patentability is seen in, although not limited to: (dependent claims 20-22, 41-43, 62-64, 83-85, the combination elements specifically claimed, including.



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(as per claims 20, 41, 62, 83) identifying the individual of a selected portion of a plurality of individuals having the maximum decrease in deltas as the winner of the competition to determine which individual of the selected portion of the plurality of individuals has improved the most. The closest prior art of record does not teach or fairly suggest this feature in the combination as claimed.

(as per claims 21, 42, 63, 84) determining for each individual of a selected portion of a plurality of individuals a respective variance of respective deltas; and identifying the individual of the selected portion of the plurality of individuals having the least variance as the winner of the competition to determine which individual of a selected portion of the plurality of individuals has been most consistent in practicing repetitive motions. The closest prior art of record does not teach or fairly suggest this feature in the combination as claimed.

(as per claims 22, 43, 64, 85) comparing for each individual of a selected portion of a plurality of individuals at least one respective executed repetitive motion against a respective motion template to determine at least one respective delta between the respective motion template and the respective executed repetitive motion; and identifying the individual of the selected portion of the plurality of individuals having the least delta as the winner of the competition to determine which individual is practicing closest to a respective motion template. The closest prior art of record does not teach or fairly suggest this feature in the combination as claimed.

#### ***Response to Arguments***

Applicant's arguments with respect to claim 1-86 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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- Petrov, M. et al. (Optical 3D digitizers: bringing life to the virtual world, Computer Graphics and Applications, IEEE , Volume: 18 , Issue: 3 , May-June 1998 Pages:28 – 37) – disclose 3D triangulation techniques.
- Laszlo, M.J. (Techniques for visualizing 3-dimensional manifolds Visualization, 1990, Proceedings IEEE Conference, 23-26 Oct. 1990 Pages:342 – 352) – discloses disclose 3D triangulation techniques.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is (571) 272-4443. The examiner can normally be reached on M-F 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**XUAN M. THAI**  
**SUPERVISORY PATENT EXAMINER**

*AM 3 713*